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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,074	01/16/2004	Hideo Horigome	00862.023407.	5289
5514 7590 06/07/2007 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER FANTU, YALKEW	
			ART UNIT 2838	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	Application No. 10/758,074	Applicant(s) HORIGOME, HIDEO	
	Examiner Yalkew Fantu	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-10 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/11/2007</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5, 6, 9, 10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Toya (US 5,525,888).

With respect to claims 1, 5 and 10, Toya discloses an electric charging apparatus (Fig. 1 element 30) for holding a secondary battery (rechargeable battery) (Fig. 3 element 20; Col. 3 line 49), the electric charging apparatus (fig. 1, 30) being attachable to an electronics apparatus (Fig. 1 element 10), in addition to that see (Col. 3 line 1-11). (The battery pack in Fig 1. element 20 contains rechargeable batteries). While the electronic charging apparatus is attached to the electronic apparatus (fig. 1, 10 and 30), of said electronic charging apparatus comprises:

A terminal (fig. 3, 34, 35 and 38, 39) configured to supply electric power from the secondary battery (20) to the electronic apparatus 10 while the electronic charging apparatus (fig. 1, 1 and 30) is attached to the electronic apparatus 10 (when 10 is inserted in the charging apparatus; see also (col. 5, lines 28-30);

Reception means (Fig. 3 elements 12 and 35) for receiving residual (remaining) capacity information (Col.5 lines 17-18) based on the electric power supplied via the terminal (fig. 3, 34, 35, 38 and 39); a display means (Fig. 3 element 36), a display control means for causing the display means to display (Fig. 3 element 43) for displaying a secondary battery residual capacity (Col. 5 lines 17 and 18) based on residual capacity information received (Col. 5 lines 25-27); residual transmission means (the microcomputer 43 gets information about the residual capacity of the battery 20) for transmitting residual capacity information detected by said residual capacity detection means (fig. 3, 42) to the electric charging unit (30); a capacity detection means for detecting residual capacity of battery (col. 5, lines 18-22) in a state where the secondary battery is under an approximately constant load (the charger switch 41 controlled by the microcomputer 43 is capable of controlling a constant load)(claims 5 and 10). Toya also discloses this as the phone is drawing "approximate constant power," (col. 5, lines 15-30, which is a term of degree).

With respect to claim 2, Toya discloses the charging apparatus according to claim1, wherein said display control means (Fig.3 element 43) displays pattern in correspondence with the residual capacity information (See Col. 5 lines 21-22 and lines 25-27).

With respect to claim 6, Toya also teaches the electronic apparatus according to claim 5, where in residual capacity detection means (fig. 3, 43-microcomputer) detects the residual capacity based on an output voltage from the secondary battery (Col. 6 line 45 and 47).

With respect to claims 9 and 12, Toya teaches a battery residual capacity display control (Col. 4 line 66 and 67; Col. 5 line 1-7. see also Col. 5 line 16 –27) method in an electric charging apparatus (fig. 1, 1 and 30) for holding and charging a secondary battery 20, the electric charging apparatus (fig. 1, 30 and 1) being attachable to an electronic apparatus 10 that can be driven with the secondary battery 20 while the electric charging apparatus (fig. 1, 1 and 30) is attached to the electronic apparatus, said method comprising: a step of supplying electric power (20 battery power) from the secondary battery (fig. 1, 30, 20A and 20B) to the electronics apparatus 10 while the electric charging apparatus 30 is attached to the electronic apparatus 10;

A reception step of receiving residual capacity information of the secondary battery (Col. 5 lines 21-27), detected by said electronic apparatus (fig. 3, 10 comes with a microcomputer 13) based on the supply electric power, from the electronic apparatus; and a display control step of causing a display unit to display a battery residual capacity (Col. 6 lines 40-50) of the secondary battery based on the residual capacity information received in said reception step (col. 6, lines 24-30); a communication unit (Fig. 3 element 12 and 35), a display control (Fig. 3 element 36 and 43) configured to display battery residual capacity information of the secondary battery, and a control unit (Fig. 3 element 43, microcomputer) (claim 12).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toya (US 5,525,888) as applied to claim 1 above, and further in view of Horigome et al (US 5,631,677) combined with Nakamiya (US 6,563,766).

With respect to claim 3, Toya discloses the charging apparatus according to claim 1 as set forth above in the 35 USC 102 rejection, and electrical power input means based on a commercial power source (Fig. 3 element 32), however, does not explicitly disclose power source relay means for the driving voltage inputted by said electric power input, in addition to the output voltage from the battery.

The Nakamiya reference teaches driving voltage inputted by said power input (Fig. 3 element 19) and voltage from the battery (Fig. 3 element 20. see Col. 6 lines 7-10). Nakamiya, however, does not disclose power source relay expressly.

The Horigome reference, on the other hand, teaches power source relay as the power-generating device (Fig. 1 element 40) introduces an electromagnetic induction type alternating current power generating device in which a power generating rotor (Fig. 1 element 42) so as to output a power induced in a power generating coil connected to a power generating stator (Fig. 1 element 42). As a result, a power is generated by the use of energies related to the user's activities, and thus generated power drives the device (see Col 9 lines 19-35).

With respect to claim 4, Toya discloses the charging apparatus according to claim 3, but, doesn't disclose wherein said power source relay means selects higher

one of the output voltage from the battery and the driving voltage from the said electric power input means, and supplies the selected voltage. Horigome et al, however, teaches, " for selecting either of these two driving power supplies, and a power –supply of the driving power supply and sending an output signal to an input port." (Col. 6 lines 7-16)

Toya, Nakamiya and Horigome et al are analogous art because they are from the same field of endeavor namely battery charging, battery capacity and voltage detection of electronic apparatus.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art, to have added a power source relay means and selecting higher one of the secondary battery and the driving voltage output voltages from said electrical input power. As well known in the art, a relay responds to a small current or voltage change by activating switches that help select power supply and send to the desired output. The suggestion and motivation for doing so would have been obvious in view of the teachings of Toya, Horigome et al, and Nakamiya as described above.

Therefore, it would have been obvious to combine Horigome et al, Nakamiya with Toya for the benefit of the charging apparatus comprising electric power input means, power source relay means, and power source selecting means of higher output voltage from the battery and electric power driving input to obtain the invention as specified in claims 3 and 4.

Claims 7, and 8 are rejected under 35 USC 103(a) as being unpatentable over Toya (US 5,525,888) in view of Horigome et al. (US 5,631,677).

With respect to 7 and 8, Toya discloses an electronics apparatus (Fig. 1 element 10), which an electronic charging unit (Fig. 3 element 30) comprising residual capacity detection means (Col. 5 lines 17-19), residual transmission means (Col. 5 lines 20-27), and a predetermined timing (Col. 3 lines 57-67). However, Toya reference does not disclose wherein said electronic apparatus is an image printing apparatus as in claim 7, and an ink jet printing apparatus as in claim 8.

Horigome et al., however discloses imaging printing apparatus (abstract), which performs image printing by driving a print head (Fig. 1 element 12); and an ink jet printing apparatus (Fig. 1; Col. 3 lines 33-34) that forms an image of printing medium by discharging ink from the print head (Col. 5 lines 33-40).

Toya and Horigome et al. are analogous arts because they are from the same field of endeavor namely printing apparatus, battery charger and battery capacity detection.

At the time of the invention it would have been obvious to a person having ordinary skill in the art to provide charging unit with capacity detections, and residual transmission means as taught by Toya to the printer apparatus of Horigome et al. to provide a residual capacity detection means for the image printing apparatus, and ensure the battery charging condition of the printer.

The suggestion and motivation for doing would have been that the use of charging unit, and residual capacity detection informs the user about the battery power condition and prevents the printer from running out of power while in use.



Therefore it would have been obvious to combine Horigome et al with Toya for the benefit of printing apparatus with charging and capacity detection means to obtain the invention as specified in claims 7 and 8.

### ***Response to Arguments***

Applicant's arguments filed on 02/20/2007 have been considered but are ineffective to overcome the Toya et al, Nakamia and Horigome et al. references (See the rejection above).

Applicant argues that "... not seen disclosed or suggest... receiving residual capacity information of a secondary battery... detected by an electronic apparatus based on power supplied via an electric charging apparatus." But, Toya discloses an electric charging apparatus (fig. 3, 41 and 43) displaying the residual capacity information (col. 6, lines 44-48) of a secondary battery (fig. 3, 20), detected by the electronics apparatus (the microcomputer 43 sends battery capacity information to the portable electronic (10) microcomputer 13 via the communication terminals 35 and 12). The charging apparatus and the electronics apparatus, both have microcomputers to send and receive information related to the battery capacity. Regarding the capacity information detection means to an electric charging unit, the microcomputer 43 gets information about the residual capacity of the battery 20 using residual capacity detection means 42 to an electric charging unit 30 (see fig. 3).

Applicant argues that displaying information on a portable telephone based on battery information receives from a charger is not same as the electric charging apparatus itself displaying the residual capacity information of the secondary battery.

But, Toya discloses that the charging apparatus itself has a charging status display means as illustrated in fig. 2, 36. The battery capacity and display means is controlled by the microcomputer 43, which is capable of controlling the display means, the LED to show the charging capacity until it comes to the point of full charge. In addition, the battery capacity information is also detected by the microcomputer 43 of the charging apparatus transmitted to the microcomputer fig. 3, 13 of the electronic device 10.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yalkew Fantu whose telephone number is 571-272-8928. The examiner can normally be reached on (M-F);(8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl D. Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
KARL EASTHOM  
SUPERVISORY PATENT EXAMINER